

## **REMARKS**

Applicant would like to thank the examiner for the detailed office action mailed on February 23, 2007.

Claims 1-18 are pending. Claims 1-18 have been rejected by the examiner.

Claims 11-18 have been rejected by the examiner under 35 U.S.C 112, 1<sup>st</sup> paragraph, as being directed to a single means claim.

Claims 1-11 have been rejected by the examiner under 35 U.S.C 112, 2nd paragraph, as being incomplete or indefinite.

Claims 1-2, and 11-12 have been rejected under 35 U.S.C 102 as being unpatentable over Mohan et al. (WO 02/096053).

Claims 3, 8, and 13 have been rejected under 35 U.S.C 103 as being unpatentable over Mohan et al, supra, in view of Hartmann et al. (U. S. Application 2003/145036).

## **FOREIGN PRIORITY**

Applicant would like to thank the examiner for acknowledging applicant's claim for foreign priority. The certified copy of application 1296/DEL/02 filed in India 12/24/2002 will be filed before the payment of the issue fee.

## **Amendments**

The amendments are not to be construed as an admission by Applicant of the correctness of the rejection. The claims have been amended to correct the claim objections (Office action at page 2) outlined by the examiner. Claims 11-18 (renumbered) have been amended to correct the "single means" observation (Office action at page 3)

articulated by the examiner. Claims 2-11 have been amended to correct the antecedent basis outlined by the examiner.

**Request for Reconsideration**

Applicant requests reconsideration of the rejection of Claims 1-18

**Rejection under 35 USC § 102**

To anticipate a claim under 35 U.S.C § 102 a single source must contain all of the elements of the claim. Lewmar Marine Inc. v. Barient, Inc., 627 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements “arranged as in the claim.” (emphasis added) Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the ...claim.” (emphasis added) Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q. 1913, 1920 (Fed. Cir. 1989). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

**Mohan et al. (WO 02/096052) does not anticipate Claims 1-2 and 11-12 as presently amended**

Applicant respectfully traverses the rejection of claims 1-2 and 11-12 because the Mohan et al reference fails to teach or suggest all of the elements of applicant's claims. The present invention relates to a system and method of digital transmission employing an improved modulation technique having both power and data range efficiency. This technique may be called, ‘Conjugate Pulse Position Modulation’ (CPPM), which utilizes multiple Digital Pulse Position Modulation (DPPM) formats, whereby M data bits/samples are conveyed by splitting them into sets of k bits/samples.

The claims have been amended to recite that “the encoder adapts the data by separating the data into forward and conjugate pulse positions over a transmission

channel.” This limitation (original claim 4) was not addressed by the examiner in the detailed office action.

Rejection under 35 USC § 103

Claims 3, 8, and 13 have been rejected under 35 U.S.C 103 as being unpatentable over Mohan et al, *supra*, in view of Hartmann et al. (U. S. Application 2003/145036).

Section 2142 of the MPEP explains the examiner’s burden of stating a *prima facie* case of obviousness as follows:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit additional evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. ....To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

Applicant respectfully traverses the rejection of claims 3, 8, and 13 because the Mohan et al reference fails to teach or suggest all of the elements of applicant’s claims. The present invention relates to a system and method of digital transmission employing an improved modulation technique having both power and data range efficiency. This technique may be called, ‘Conjugate Pulse Position Modulation’ (CPPM), which utilizes

multiple Digital Pulse Position Modulation (DPPM) formats, whereby M data bits/samples are conveyed by splitting them into sets of k bits/samples.

The claims have been amended to recite that “the encoder adapts the data by separating the data into forward and conjugate pulse positions over a transmission channel.” This limitation (original claim 4) was not addressed by the examiner in the detailed office action. Therefore, the rejection of claims 3, 8, and 13 under 35 U.S.C 103 as being unpatentable over Mohan et al, *supra*, in view of Hartmann et al. (U. S. Application 2003/145036) should be withdrawn based on the added limitations to the claims.

Rejection under 35 USC § 112

Claims 11-18 have been rejected by the examiner under 35 U.S.C 112, 1<sup>st</sup> paragraph, as being directed to a single means claim. The Claims (11-18) are no longer directed to a single means claim.

**CONCLUSION**

Applicant believes this reply is fully responsive to all outstanding issues and places the application in condition for allowance. If this belief is incorrect, or other issues arise, the examiner is encouraged to contact the undersigned at the telephone number listed below.

Dated: 13 March 2007

Respectfully submitted,

By:   
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